Peabody, Daniel (EGLE)

From: Peabody, Daniel (EGLE)
Sent: Friday, May 27, 2022 12:03 PM
To: saric.james@epa.gov
Cc: Miller, Megen (AG); Roberts, Keegan (robertsk@cdmsmith.com); Williams, Lisa; Diana, Matthew (DNR); Wesley, Jay (DNR); Mills, Mark (DNR); Alexander, Kyle (EGLE); Haroldson, Derek (EGLE); Trumble, Luke (EGLE); Kline, David (EGLE); Walczak, Joseph (EGLE); Riley, John (EGLE)
Subject: EGLE Cover Letter and Detailed Comments_Kalamazoo River Superfund Site OU5 Area 1 Remedial Reach RA_TCP_DP_SP_BP_DMMPP
Attachments: FINAL_EGLE Cvr Letter and Comments_OU5 Area 1 Remedial Reach RA_TCP_SP_DP_BP_DMMPP.pdf

Jim,

Attached are EGLE's comments on the Round 4 submittals for subject work plans that were submitted to support the upcoming remedial action for the Remedial Reach. The Round 4 submittals included the Temporary Construction Plan (TCP), the Survey Plan (SP), the Backfill Plan (BP), the Dredge Plan (DP), and the Dredge Material Management and Procession Plan (DMMPP). Comments on other RA WPs will be submitted under separate cover letters and generally grouped based on the week they were submitted.

Thanks,

Daniel Peabody
Environmental Quality Analyst
Remediation and Redevelopment Division
Michigan Department of Environment, Great Lakes, and Energy
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STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

LIESL EICHLER CLARK
DIRECTOR

May 27, 2022

VIA E-MAIL and U.S. MAIL

Jim Saric
Remedial Project Manager
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3511

Dear Jim Saric:

SUBJECT: Michigan Department of Environment, Great Lakes, and Energy (EGLE) Comments on the Temporary Construction Plan (TCP), the Survey Plan (SP), the Backfill Plan (BP), the Dredge Work Plan (DWP), and the Dredge Material Management and Processing Plan (DMMPP), all dated April 2022, Area 1 of Operable Unit 5 (OU5), Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site (Site).

By way of this correspondence, EGLE formally submits this cover letter and detailed comments (attached) for inclusion in the Administrative Record for the Site. A brief description of the Area 1 remedial action (RA) is included below, and a few over-arching comments are provided thereafter.

The draft subject documents that were submitted provide details to support implementation of the Area 1 RA. Georgia-Pacific and International Paper are respondents (Respondents) to a Unilateral Administrative Order (UAO) (Docket No: V-W- 17-C-002) for remedial design and remedial action (RD/RA) for Area 1 of OU5. The UAO requires implementation of the Area 1 Record of Decision (ROD) (Appendix A) and the procedures and requirements for implementing the work, are outlined in the Statement of Work (SOW) (Appendix B) that is included as an attachment to the UAO. The selected sediment remedy in the Area 1 ROD requires, among other things, excavation of the Crown Vantage Side Channel (CVSC) and select sediment 'hot spots' in a portion of the river referred to as the remedial reach which begins in the city of Kalamazoo near Mayors Riverfront Park and extends approximately three river miles downstream to Parchment.

Following completion of the RD/RA pre-design investigation (PDI) as described in the PDI Evaluation Report Parts 1 & 2, the PDI sampling in 2017 'eliminated' KPT-20 as a 'hot spot' but the PDI sampling identified Verburg Park Pond as a 'hot spot'.

At the 30 percent RD phase, the United States Environmental Protection Agency (U.S. EPA) approved a request from the Respondents to splinter the RD/RA for the sediment remedy into three individual components based on location. The RD and RA for the CVSC 'hot spot' was completed in 2020 and 2021, respectively.

The 95 percent Sediment Remedial Design (95RD) – Remedial Reach, which included design details for 'hot spots' KRT-4, KRT-5/FF-19 and SIM-1 was submitted in August 2021, followed by an Addendum that was submitted in October 2021 for Bedform 118 (SED118), which is an additional 'hot spot' located upstream of the Verburg Park Pond outlet that was identified during the RD/RA PDI and added to the scope of the RD/RA by the U.S. EPA during development of the 95RD – Remedial Reach. EGLE provided a cover letter and detailed comments on the 95RD – Remedial Reach and Addendum to the U.S. EPA on October 27, 2021. The Final Sediment Remedial Design (100RD) – Remedial Reach was submitted on December 17, 2021. EGLE provided comments on the 100RD to the U.S. EPA on February 9, 2022, and the U.S. EPA issued an approval of the 100RD and authorization to proceed with RA the same day. The sediment RD for the furthest upstream 'hot spot' in the Remedial Reach, KPT- 19, is not part of this RD/RA. EGLE expects to receive a standalone RD for KPT-19 soon.

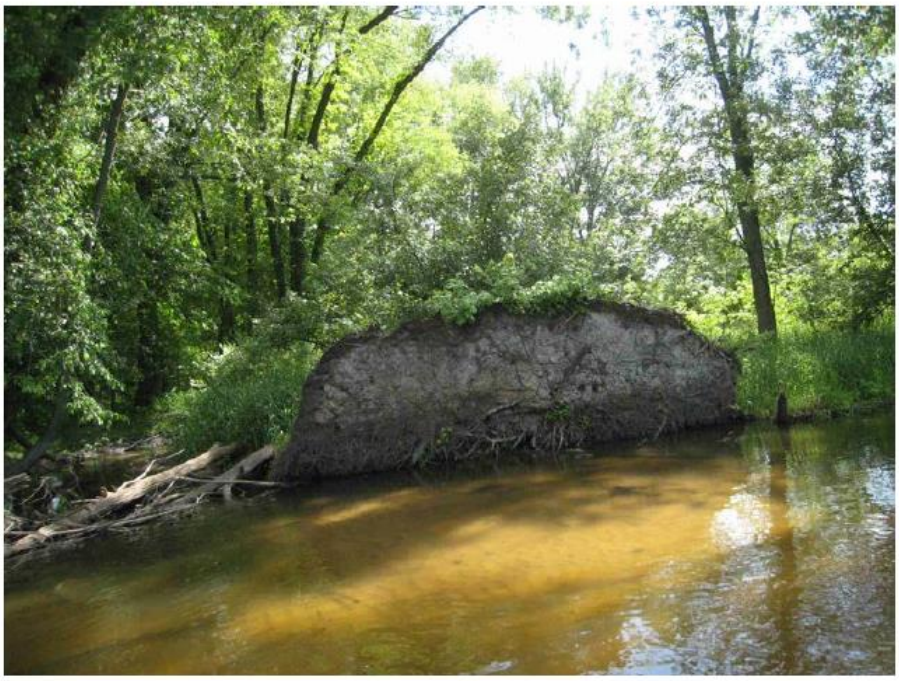
The subject documents were submitted per the requirements of Section 4 of the SOW and provide details for sediment 'hot spots' referred to as KRT-4, KRT-5/FF-19, Verburg Park Pond, SED118 and SIM-1, which are in the remedial reach. Similar to the RA work plans and documents that were submitted by the Respondents prior to implementing the RA at the CVSC, an expedited review and comment time is being requested so that the RA can begin at or around June 1, 2022. The subject TCP, SP, and Drainage Pond (DP) work plans were submitted on April 19, 2022. The subject DMMPP and BP were submitted on April 22, 2022. As of the date of this letter, all RA work plans that are expected to be submitted to support the Remedial Reach RA have not yet been submitted for review and RA works plans that were disapproved and conditionally approved have not been revised and re-submitted for review and approval.

EGLE's comments were developed after reviewing the subject documents, presentation slides provided during work groups meetings that were held on March 29, April 11, April 12, April 19, April 22 and April 26, and following a site visit to the proposed staging areas that was held on April 7 and attended by the U.S. EPA and their consultant (Jacobs Engineering), EGLE, the Area 1 Respondents and their respective consultants (Wood Environment & Infrastructure Solutions [Wood], and GeoSyntec Consultants), and the contractor that was selected by the Respondents to implement the RA (Sevenson Environmental Services).

A few over-arching comments on the subject RA work plans are included below and detailed comments are provided as an attachment.

1. Contaminated source material, often visible as fine, grey clays in this reach, is often observed within the root mass of toppled trees near the shoreline and may have high concentrations of polychlorinated biphenyls (PCBs).

   If these types of materials are observed during shoreline clearing and/or shoreline or submerged stump removal activities, they should be removed and replaced with clean backfill so that they are not left behind to serve as a long-term source of PCBs to the system. See image below from Appendix C of the Area 1 Feasibility Study highlighting this concern.



PHOTOLOG SHEET
Site: Kalamazoo River
Location: Area 1/Section 5
Project: Kalamazoo River
Date: 6/11/2013
Photo #: 59
Photographer: Mark Prytula
Description: 42.406587 N 85.589321 W Tree roots upturned.

2. Upon completion of a survey and validation of the data (and concurrent with the RA implementation), the Respondents should submit all data being collected to avoid delays in receipt of data. This would include but not be limited to confirmation sample results and as-builts (i.e., pre- and post-construction bathymetry/LiDAR or other survey data). This data (and other, similar data collected during implementation of the Area 1 Remedial Action) should be uploaded in a timely manner to the centralized database that is maintained by the US EPA since it will need to be retained and utilized in the future during post-construction monitoring. Text in the TCP states, “If weather conditions cooperate, Sevenson will work through the winter as much as possible to progress the work forward. Presently, our schedule indicates a brief winter shutdown for weather and holidays. Dredging in 2022 would advance as weather permits with sediment to be processed at SPA-1”.

3. In discussions following completion of the Crown Vantage Side Channel (CVSC) RA and leading up to the Remedial Reach RA, the Respondents indicated that they would be shutting down for the winter and resuming work in spring.

   This decision was directly influenced by challenges that occurred during the CVSC RA, which began during the Fall and continued through the Winter and into the Spring. EGLE encourages the Respondents to reconsider the approach outlined in the TCP and adjust the schedule to include a temporary shut down during the winter season, which will likely extend from November until March or April.

4. Dredge operations and support equipment outlined in the DP includes a 300-horsepower work boat of unknown length and two distinct types of pontoon pushboats. The photographs in the DP show that the pushboats are fairly large watercraft with powerful motors and the work boat appears to be 20 to 30 feet in length. EGLE has concerns that this equipment may be oversized for the shallow water and relatively narrow width of the river in this section. Furthermore, the dredging operations footprint for the main channel will encompass nearly the entire width of the channel, leaving very little room to operate large vessels and maneuver scows. Dredging and support operations in Verburg Pond will be limited by shallow water depths and vessel draft. EGLE recommends the Respondents consider downsizing the work boats being proposed to increase maneuverability.

5. Revise the text to specify the size/weight of armor stone that will require load out via an excavator. Using qualitative adjectives such as “larger” armor stone can lend to confusion when implementing these plans. Provide an explanation for why “larger” armor stone is being proposed, where it will be utilized, and the volume proposed for placement at each location.

6. Instead of utilizing push cores to supplement verification protocols on an as-needed basis, all dredge management units (DMUs) should include push cores as an additional verification technique to confirm that the design backfill thickness has been achieved. Uniform lifts may not be achieved in areas with high flowrates and deeper waters.

7. Additional sampling equipment beyond a push core sampler must be identified. Manual push core refusal will not be considered acceptable for limiting the number of confirmation samples in a composite or making claims of high subgrade. The Respondents must utilize robust coring methods for confirmation sampling that can penetrate the entire soft sediment column and is consistent with the drive methods utilized during the pre-design investigation.

8. Designated “sediment” and “backfill” scows should be used as much as possible to avoid cross-contamination of clean backfill material.

Revise the text to include a requirement that scows which have been in direct contact with Toxic Substance Control Act (TSCA) sediments will require PCB wipe sampling verification of proper decontamination prior to using the scow for backfill.

9. Sediments with PCB concentrations greater than 50 parts-per-million and subject to handling and disposal requirements under the TSCA will be dredged to depths of five and nine feet in KRT5-10. Much of the impacted TSCA sediments, however, are to remain based on sloping conditions around the syphon line. As the pontoon excavator is moving through this area TSCA impacted sediments may be embedded in tracks, treads and likely covering the excavator. A plan needs to be developed discussing how the pontoon excavator will enter this DMU from land, and decontamination procedures for the entire excavator when exiting a TSCA dredge area and before returning to land. Additionally clarify how the excavator will be moved while inside the DMU. For example, will there be a support vessel pushing the pontoon excavator?

EGLE appreciates the opportunity to review and comment on the subject Work Plans for Area 1 and looks forward to working with all parties involved on this project. If you have any questions, please contact Mr. Daniel Peabody, Environmental Quality Analyst, Remediation and Redevelopment Division at 517-285-3924; PeabodyD@Michigan.gov; or EGLE, P.O, Box 30426, Lansing, Michigan 48909-7926.

Sincerely,

Daniel Peabody, Environmental Quality Analyst
Superfund Section
Remediation and Redevelopment Division

Attachments
att/cc: Megen Miller, Michigan Department of Attorney General
Dr. Keegan Roberts, CDM Smith
Dr. Lisa Williams, US Fish and Wildlife Service
Matt Diana, MDNR
Jay Wesley, MDNR
Mark Mills, MDNR
Kyle Alexander, EGLE
Derek Haroldson, EGLE
John Riley, EGLE
Luke Trumble, EGLE
David Kline, EGLE
Joseph Walczak, EGLE

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site

Temporary Construction Plan – Remedial Reach

Kalamazoo River Area 1
April 2022

General Comments
General Comment #1: In several RA work plan submittals, elevations are referenced to the National Geodetic Vertical Datum of 1929. EGLE understands that referencing the older vertical datum may be helpful when comparing surveyed elevations to historic structures (i.e., dams) or certain types of maps (i.e., flood insurance maps), however; most modern survey data that is collected is referenced to the updated datum (NAVD88), including data used in flood insurance maps. Please explain why this datum is being utilized instead of the updated vertical datum.

General Comment #2: Upon completion of the survey and validation of the data (and concurrent with the RA implementation), the Respondents should submit all data being collected including but not limited to confirmation sample results and as-builts (i.e., pre- and post-construction bathymetry/LiDAR or other survey data) to avoid delays in receipt of data. This data (and other, similar data collected during implementation of the Area 1 Remedial Action) should be uploaded in a timely manner to the centralized database that is maintained by the US EPA since it will need to be retained and utilized in the future during post-construction monitoring.

Specific Comments
Commenting Organization: EGLE
Section: 3.0 **Page #: 2** **Lines #: 4-6**
Specific Comment #1: The text states, "If weather conditions cooperate, Sevenson will work through the winter as much as possible to progress the work forward. Presently, our schedule indicates a brief winter shutdown for weather and holidays. Dredging in 2022 would advance as weather permits with sediment to be processed at SPA-1".

In discussions following completion of the Crown Vantage Side Channel (CVSC) RA and leading up to the Remedial Reach RA, the Respondents indicated that they would be shutting down for the winter and resuming work in spring. This decision was directly influenced by challenges that occurred during the CVSC RA, which began during the Fall and continued through the Winter and into the Spring. EGLE encourages the Respondents to reconsider the approach outlined in the TCP and adjust the schedule to include a temporary shut down during the winter season, which will likely extend from November until March or April.

Commenting Organization: EGLE
Section: 3.0 **Page #: 2** **Lines #: 4-6**
Specific Comment #2: Straw wattle locations should be provided and labeled on the RSA figures 2 through 4.

Commenting Organization: EGLE
Section: 4.0 **Page #: 2** **Lines #: 7-11**
Specific Comment #3: Add the 25-year flood elevation to this section, "*RSAs will be constructed above the 25-year flood elevation X.X ft….*". Also discuss the elevations for the three areas.

Commenting Organization: EGLE

Section: 4.0 **Page #: 3** **Lines #: 1-3**
Specific Comment #4: The text states that, "S*PAs will be constructed with the intent of containing all liquids generated within the area, including water from storm events.*" Revise this statement to include the largest storm event that the SPAs are expected to handle based on SPA design.

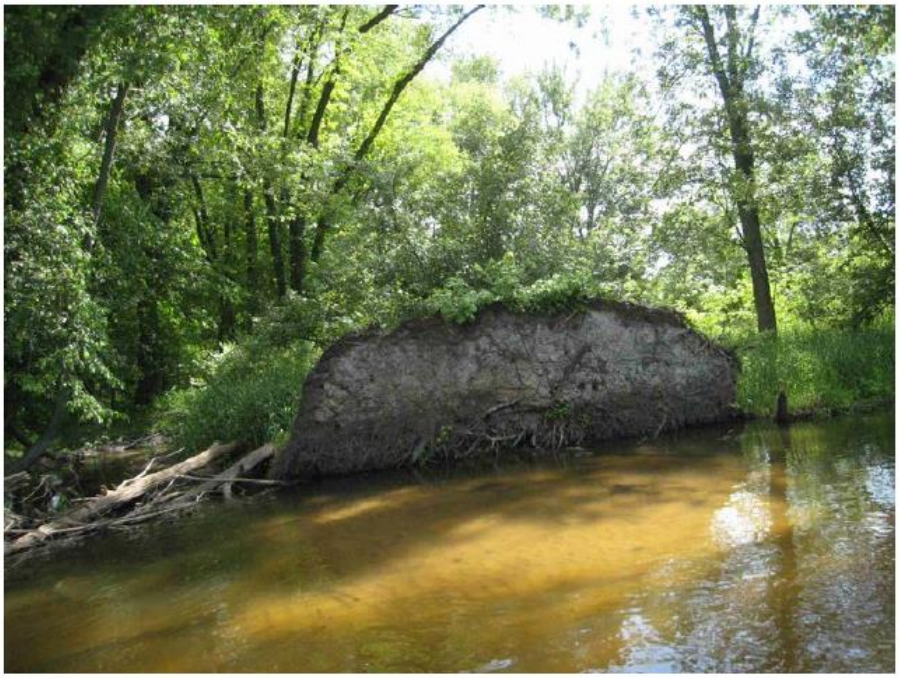
Commenting Organization: EGLE
Section: 4.1 **Page #: 3** **Lines #: N/A**
Specific Comment #5: Other SPA-s (SPA-2 and SPA-3) indicate if the SPA will be used for both TSCA and Non-TSCA materials. Clarify is SPA-1 will only be used for non-TSCA sediments or adjust the detail on Figure 2 to indicate where TSCA soils will be managed.

Commenting Organization: EGLE
Section: 4.1 **Page #: 3** **Lines #: N/A**
Specific Comment #6: Similar to the format of Sections 4.2 and 4.3, this section should describe the square footages dedicated to each area, indicate the number of days of production storage designed and additional summary elements (etc.).

Commenting Organization: EGLE
Section: 4.1 **Page #: 3** **Lines #: 17-19**
Specific Comment #7: The Statement "*Typical offloading structures at previous projects are shown below and the support will be designed by a structural engineer, licensed in Michigan*" is overly vague. Describe the typical offloading structures in the 4 images on page 4 and indicate which components will be used in the specific SPA. Additionally, the figure is not below on page 3 but on top of page 4.

Commenting Organization: EGLE
Section: 5.0 **Page #: 7 & 8** **Lines #: N/A**
Specific Comment #8: Text in Section 5.0 states, "Any trees requiring clearing for 2023 work will be identified and work will be coordinated with the Respondents' Representative and cleared by Sevenson in later 2022 (after October 1st [Indiana bat habitat window]. Tree and shrub removal adjacent to shorelines will be restricted to the minimum necessary to permit access for equipment and facilitate the work. Where removal is required, Sevenson will cut the vegetation within 6-inches of the shoreline to allow root and stumps to remain in-place, to the extent practicable to facilitate the work. Stumps or roots that interfere with the practical execution of the work will be removed unless they are deemed critical to bank stability by Respondent's Representative. Submerged stumps or roots removed during vegetation clearing will be managed as debris (specification Section 35 20 23). Cleared vegetation will either be removed from the site, mulched, or left on property as-is. Vegetation will only be left on-site with concurrence from the Respondents' Representative.".

PCB-laden source material, often visible as fine, grey clays in this reach, is often observed within the root mass of toppled trees near the shoreline. If these types of materials are observed during shoreline clearing and/or stump removal activities, they should be removed and replaced with clean backfill so that they are not left behind as a long-term source of PCBs to the system. See image below from Appendix C of the Area 1 Feasibility Study highlighting this concern.



PHOTOLOG SHEET
Site: Kalamazoo River
Location: Area 1/Section 5
Project: Kalamazoo River
Date: 6/11/2013
Photo #: 59
Photographer: Mark Prytula
Description: 42.406587 N 85.589321 W Tree roots upturned.

Commenting Organization: EGLE
Section: 6.0 **Page #: 8** **Lines #: N/A**
Specific Comment #9: Revise the text to discuss details of equipment decontamination procedures or provide a reference to plan that includes decontamination procedures.

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site

Survey Plan – Remedial Reach

Kalamazoo River Area 1
April 2022

General Comments

General Comment #1: In several RA work plan submittals, elevations are referenced to the National Geodetic Vertical Datum of 1929. EGLE understands that referencing the older vertical datum may be helpful when comparing surveyed elevations to historic structures (i.e., dams) or certain types of maps (i.e., flood insurance maps), however; most modern survey data that is collected is referenced to the updated datum (NAVD88), including data used in flood insurance maps. Please explain why this datum is being utilized instead of the updated vertical datum.

General Comment #2: As survey (i.e., pre- and post-construction) and sampling data is collected and validated, the Respondents should submit the data in a timely manner to the centralized database that is maintained by the US EPA since it will need to be retained and utilized in the future (e.g., during post-construction monitoring).

General Comment #3: For bathymetry figures developed and shared by the Respondents during the RA, EGLE's preference would be to utilize a six-inch contour interval and red-green-blue color ramp.

General Comment #4: The SP only discusses pre-condition surveys and states that, "Post-construction surveys will include a site conditions surveys and topographic and bathymetric surveys, as needed". First, EGLE is certain a post-construction survey will be needed. Second, additional surveys may also be needed during RA implementation (i.e., to confirm that each DMU has achieved the required cut depth). Revise the document to include surveying during and following completion of the RA.

Specific Comments

Commenting Organization: EGLE
Section: 1.3 **Page #: 3** **Lines #: 1-3**
Specific Comment #1: Revise the survey plan to specify the project benchmarks to be used for the two control points. Also clarify if survey information for the proposed control points is already available or if the control points will be surveyed by Seaworks.

Commenting Organization: EGLE
Section: 2.1 **Page #: 2** **Lines #: 1-2**
Specific Comment #2: Clarify most of the same survey technologies. For example, can the Z-boat perform multibeam surveys? Discuss or compare the technologies presented for this project and indicate which ones will be conducted by each or both equipment.

Commenting Organization: EGLE
Section: 2.5 **Page #: 6** **Lines #:**
Specific Comment #3: Aircraft flown lidar is not discussed in the project details. Delete this section as the paragraph 1.1 discusses drone-view technologies performing the lidar, which one would assume to be conducted with a drone from a lower elevation providing better data than a traditional high altitude aircraft flyover.

Commenting Organization: EGLE
Section: 2.6 **Page #: 6** **Lines #: Table**
Specific Comment #4: Construction surveys should rely on multibeam surveys as much as possible. If topographic pole shots are to be used, then the grid must be specified. In areas where topographic pole shots are used for post construction verification, they must also be the method used for the pre-construction survey. The grid size must also be consistent for both surveys. For example, if the topo data is to be averaged on a 5 ft x 5 ft grid isopach, the topo grid should be a maximum of 5 ft x 5 ft.

Commenting Organization: EGLE
Section: 4.1 **Page #: 8** **Lines #: N/A**
Specific Comment #5: This document should also indicate if cross line surveys will also be used when single beam surveys are conducted. Cross line surveys are an additional line of evidence to verify the single beam surveys were successful in their coverage area.

Commenting Organization: EGLE
Section: 4.2.1 **Page #: 9** **Lines #: Figure 4.1**
Specific Comment #6: Figure 4.1 does not display a 100% overlap. It appears to be approximately 50% (or 25% of each pass coverage). Adjust the spacing so that Figure 4.1 is consistent with the text in Section 4.2.1 that states generally "*100% overlap (200% coverage)*".

Commenting Organization: EGLE
Section: 4.2.1 **Page #: 9** **Lines #: 10-12**
Specific Comment #7: This section must state that the method used for collecting preconstruction surveys will be the same method and spacing used for post construction surveys. Survey tracking lines must also be provided as a deliverable to EPA to be compared for similar coverage passes and completeness. This is even more important for any areas conducted with single beam surveys.

Commenting Organization: EGLE
Section: 4.2.1 **Page #: 9** **Lines #: 20-22**
Specific Comment #8: Topographic survey methods should be conducted in removal areas to limit tree and shrub effects on lidar data. Additionally, pre-construction surveys must be conducted using the same technology and spacing as post-construction verification surveys. The method provided is unacceptable for remedial construction work this precise.

Commenting Organization: EGLE
Section: 4.2.1 **Page #: 9** **Lines #: 25-28**
Specific Comment #9: Remove the word approximate from the 5 ft grid spacing statement or specify a maximum tolerance. Adjusting the 5 ft grid around objects or incomplete removal is not acceptable and this statement provides ambiguity and flexibility for moving points.

Commenting Organization: EGLE
Section: 4.3 **Page #: 9** **Lines #: 1-2**
Specific Comment #10: Provide a more detailed description of how filtering is performed. For example, what is considered noise and unsuitable data? Also discuss when and why manual manipulation of the point files will be conducted outside of the algorithm adjustments.

Commenting Organization: EGLE
Section: 4.3 **Page #: 9** **Bullets #: 1-4**
Specific Comment #11: Standard Topographic surveys should be used as the primary survey method for excavation areas. At a minimum, LiDAR should not be used where trees are present. Additionally aerial LiDAR should never be used to replace multibeam data as lidar cannot effectively/accurately penetrate deeper water depths. Make two lists, one for upland priorities and a second for in water work.

Commenting Organization: EGLE
Section: 4.3 **Page #: 9** **Lines #: 22-24**
Specific Comment #12: Boat position and movement tracking lines should also be provided to EPA.

Commenting Organization: EGLE
Section: 6.0 **Page #: 1 4** **Lines #: N/A**
Specific Comment #13: Consistent with the Environmental Procedures Plan, EGLE should also be notified in the case of a spill. Revise the Spill Response section accordingly.

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site

Dredge Work Plan – Remedial Reach

Kalamazoo River Area 1
April 2022

GENERAL COMMENTS
Commenting Organization: EGLE
General Comment #1: The Dredge Work Plan "repeats" dredging and vessel operation BMPs provided in the Resuspension Control Plan. The BMPs provided in both plans are inconsistent. Revise both plans to include a consistent set of BMPs after addressing EGLE's comments on BMPs provided below (see Specific Comments #25 and #26).

SPECIFIC COMMENTS
Commenting Organization: EGLE
Section: Table 4.1 **Page #: 5** **Lines #: N/A**
Specific Comment #1: Dredge operations equipment shown in Table 4.1 includes a 300-horsepower work boat of unknown length and two different types of pontoon pushboats. The photographs show that the pushboats are fairly large watercraft with powerful motors and the work boat appears to be 20 to 30 feet in length. EGLE has concerns that this equipment may be oversized for the shallow water and relatively narrow width of the river in this section. Furthermore, the dredging operations footprint for the main channel will encompass nearly the entire width of the channel, leaving very little room to operate large vessels and maneuver scows. Dredging and support operations in Verburg Pond will be limited by shallow water depths and vessel draft. EGLE recommends the Respondents consider downsizing the work boats being proposed to increase maneuverability.

Commenting Organization: EGLE
Section: 4.0 **Page #: 6** **Lines #: N/A**
Specific Comment #2: Add a photo of the Sennebogen.

Commenting Organization: EGLE
Section: 4.0 **Page #: 6** **Lines #: 1-4**
Specific Comment #3: A second note should be added indicating that the images provided with excavators and non-environmental buckets are for reference only and that best management practices and environmental buckets as discussed in Section 4.1 will be utilized for removing sediments.

Commenting Organization: EGLE
Section: 4.1 **Page #: 6** **Lines #: 1**
Specific Comment #4: Delete "When conditions allow" from the first sentence. The second paragraph indicates the contingency for using a conventional environmental bucket with thumb attachment for denser material and significant debris. If there are other conditions that may limit using the 3.5 cy level cut environmental bucket, then those conditions must be stated in this plan.

Commenting Organization: EGLE
Section: 5 **Page #: 8** **Lines #: N/A**
Specific Comment #5: Approximate cycle time should be articulated clearly in this section so that rushed dredging operations leading to excess residuals can be quickly resolved with BMPs related to slower dredging.

Commenting Organization: EGLE
Section: 6.3 **Page #: 1 1** **Lines #: 3-5**

Specific Comment #6: Provide a figure showing the shoreline locations that Sevenson has identified as safe access locations for mobilization of personnel.

Commenting Organization: EGLE
Section: 7.2 **Page #: 1 4** **Lines #: 1-3**
Specific Comment #7: This section states "*There is additional water access to the north at DMU KRT5-10. This area will likely be used to launch the pontoon excavator as it is required to remove sediment in the shallow areas within DMU KRT5-10. This area may also be used to launch 25-ton micro scows on an as-needed basis for work in DMU KRT5-10.*" Identify this area on the figures, if it is not included inside of the SPA/RSA area. Additionally, this area should be added to the temporary construction plan figures for the RSA.

Commenting Organization: EGLE
Section: 7.3 **Page #: 1 4** **Lines #: 1-3**
Specific Comment #8: This section states "*Water access for equipment will likely be located directly south of SPA-3. This is where the pontoon excavator will be launched as well as where personnel may access marine equipment.*" Identify this area on the figures, if it is not included inside of the SPA/RSA area. Additionally, this area should be added to the temporary construction plan figures for the RSA.

Commenting Organization: EGLE
Section: 8.2 **Page #: 1 5** **Lines #: 1-5**
Specific Comment #9: Clarify what type of buffer is proposed. Is it a 10-foot horizontal buffer or a 10-ft vertical buffer where work can be performed under as long as equipment does not encroach within 10 feet?

Commenting Organization: EGLE
Section: 9.0 **Page #: 1 6** **Lines #: 1-3**
Specific Comment #10: Correct the first line to state a dual RTK enabled GPS system. Add additional context from Section 13, which states "The system uses a combination of inclinometers, software, and dual Real Time Kinematics (RTK)-GPS antennas for dredge bucket location." Equipment with GPS units alone are not consistent with the 100% design.

Commenting Organization: EGLE
Section: 9.1 **Page #: 1 7** **Lines #: 7-10**
Specific Comment #11: This section states "*If harder material or debris is encountered, a conventional clamshell bucket or even a digging bucket will be utilized after consultation with the Respondents' Representative.*" A conventional clamshell bucket is not discussed in Section 4.1 nor is a digging bucket without environmental thumb attachments. Delete this line or make consistent with section 4.1.

Commenting Organization: EGLE
Section: 9.2 **Page #: 1 8** **Lines #: 1-3**
Specific Comment #11: This section states "*Dredging that occurs in the main portion of the river will utilize the same dredge excavator and general process described in the previous paragraphs*." Since the previous paragraphs are inconsistent with Section 4, this statement should say dredging will occur in a process consistent with Section 4 of this document.

Commenting Organization: EGLE

Section: 9.2 **Page #: 2 0** **Lines #: 1-2**
Specific Comment #12: This section states "*The dredge process described for Verburg park Pond will also be performed in the main river sections.*" Clarify and describe this process further and explicitly discuss where moon pools will not be used. For example, will the Verburg Park Pond methods only be used at specific riverbank areas where the moon pool will not be used? Also discuss if turbidity curtains will be used in the same manner so that previously dredged areas are protected from residual dredging.

Commenting Organization: EGLE
Section: 9.3 **Page #: 2 1** **Lines #: 1-2**
Specific Comment #13: This section discusses some of Sevensons specialty equipment that may be used. Clarify if this statement means that all the times listed in Section 4 are already provided or if there is other equipment assumed to be needed. If so, add contingency equipment to Section 4.

Commenting Organization: EGLE
Section: 9.4 **Pages #: 2 1** **Lines #: N/A**
Specific Comment #14: TSCA level sediment are to be dredged to depths of 5 and 9 feet in in KRT5-10. Much of the impacted TSCA sediments, however, are to remain based on sloping conditions around the syphon line. As the pontoon excavator is moving through this area TSCA impacted sediments may be embedded in tracks, treads and likely covering the excavator. A plan needs to be developed discussing how the pontoon excavator will enter this DMU from land, and decontamination procedures for the entire excavator when exiting a TSCA dredge area and before returning to land. Additionally clarify how the excavator will be moved while inside the DMU. For example, will there be a support vessel pushing the pontoon excavator?

Commenting Organization: EGLE
Section: 9.5 **Page #: 2 3** **Lines #: 11-13**
Specific Comment #15: This section discuses an approach to dredging from deeper elevations to shallower. Dredging the bottom of a bank first may destabilize the bank or cause additional material to slough into the dredge area generating significant residuals. This approach should not be used closer to the banks or should be confirmed acceptable by a geotechnical engineer. This practice should only be used when there is no other alternative which can also remove sediments. If there is another option for removal, even if that option is slower, the method that reduces residual generation and sloughing should be used. It is best practice to dredge from higher to lower elevations to reduce the potential for sloughing, as noted in the Section 15 comment regarding dredging BMPs.

Commenting Organization: EGLE
Section: 10.0 **Page #: 2 6** **Lines #: 1**
Specific Comment #16: If inclinometers are not being proposed for shoreline monitoring, a visual monitoring plan should include the specific responsibilities of the person in charge of the inspections. Discuss how often slopes will be visually monitored (for example: daily, twice daily, constantly during construction and periodically while awaiting confirmation sampling results, etc.). Additionally discuss the parameters that will be inspected and discuss what constitutes changes and irregularities and tolerances for determining issues.

Commenting Organization: EGLE

Section: 10.0 **Page #: 2 6** **Lines #: 5-8**
Specific Comment #17: EGLE notes that root balls at the site are known to contain high concentrations of contaminated sediment/soil. If a decision is made not to remove certain tree stumps and root balls to avoid destabilizing the existing riverbank, coordination with EPA and EGLE will also be required.

Commenting Organization: EGLE
Section: 11 **Page #: 2 6** **Lines #: N/A**
Specific Comment #18: This document discussed confirmation sampling but does not discuss confirmation surveys or reporting and or surveying high subgrade prior to confirmation sampling and close out of DMUs. Add additional sections or reference appropriate submittals.

Commenting Organization: EGLE
Section: 11 **Page #: 2 6** **Lines #: 6-10**
Specific Comment #19: Additional sampling equipment beyond a push core sampler must be identified. Manual push core refusal will not be considered acceptable for limiting samples in a composite or making claims of high subgrade. Additionally, confirmation sampling and Appendix C should be in the FSP and referenced to this document.

Commenting Organization: EGLE
Section: 11.1 **Page #: 2 6** **Lines #: 6-10**
Specific Comment #20: As commented on the 100 percent design, EGLE is concerned that situations may arise during residual dredging phases that may mobilize contaminated sediment on to clean backfill if dredging is still occurring upstream of areas that are completed, and backfilling is planned as discussed in this section. EGLE understands that a situation like this is highly likely due to the limited confirmation sampling approach which only releases surficial intervals rather than fully characterizing cores for residual dredging. Revise this section when discussing backfill to state that "Backfill will be placed in each DMU once post-dredging verification is complete in all upstream DMUs."

Commenting Organization: EGLE
Section: 11.2 **Page #: 2 6** **Lines #: N/A**
Specific Comment #21: This section must reference the most up to date dredge management decision tree. A copy of the dredge decision tree should be included in this document.

Commenting Organization: EGLE
Section: 12 **Page #: 2 7** **Lines #: 12-14**
Specific Comment #22: A conventional bucket is described in this section to be used. However, a conventional bucket is not discussed in Section 4.1. Change all references in this document from conventional buckets to conventional environmental buckets.

Commenting Organization: EGLE
Section: 13 **Page #: 2 8** **Lines #: 1**
Specific Comment #23: This section states that "*Sevenson will utilize an internal key operator with years of experience.*" Indicate how many years and discuss what the minimum year requirement is for additional operators so that they are sufficiently trained to implement BMPs. If new operators are expected to be trained discuss protocols for supervision by senior experienced operators and

requirements for senior operators who will be training staff.

Commenting Organization: EGLE
Section: 13 **Page #: 2 9** **Lines #: 6-7**
Specific Comment #24: This section states that if the daily check is outside of the expected tolerance limit that recalibration or modifications to the system will be made. Add the tolerance limits that would trigger recalibration or modifications to this section.

Commenting Organization: EGLE
Section: 14.0 **Page #: 2 9** **Lines #: N/A**
Specific Comment #25: The list of vessel and equipment maneuvering BMPs provided in this section is inconsistent with the vessel operation BMPs provided in the Resuspension Control Plan. Revise this list to include all vessel operation BMPs provided in the Resuspension Control Plan.

Commenting Organization: EGLE
Section: 15.0 **Page #: 2 9** **Lines #: N/A**
Specific Comment #26: Revise this list to include all vessel operation BMPs provided in the Resuspension Control Plan. For example, the Resuspension Control Plan included the following BMPs which appear to be missing from Section 15.0 of the Dredge Work Plan:

- Allow material remaining in the bucket to drip off into the scow before bucket is repositioned for another "bite".
- Continually evaluate water quality conditions surrounding dredge barge, including any evidence of sheen.

In addition to the dredging BMPs listed in Section 15.0, the following BMPs should be considered:

- No side casting or underwater stockpiling should be allowed.
- The bucket should be paused at the water surface to maintain sediment capture.
- Bucket descent should be slowed down at least 3 feet above sediment surface to limit
- disturbance.
- Leveling of the dredge surface by dragging/sweeping the bucket should not be allowed.
- Once the bucket is above the water line it can only be opened on the barge. This could be implemented automatically with software and RTK restrictions.
- Dredging should occur from higher to lower elevations to reduce the potential for sloughing.
- Multiple bites with the dredge bucket should not be allowed.

Commenting Organization: EGLE
Section: 16.1 **Page #: 3 0** **Lines #: 11-13**
Specific Comment #27: Designated "sediment" and "backfill" scows should be used as much as possible to avoid cross-contamination of clean backfill material. Revise the text to include a requirement that scows which have been in direct contact with TSCA sediments will require PCB wipe sampling verification of proper decontamination prior to using the scow for backfill.

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site
Area 1 Dredge Material Management and Processing Plan
Remedial Reach
Kalamazoo River Area 1
April 28, 2022

SPECIFIC COMMENTS
Commenting Organization: EGLE
Section: 2.3 **Page #: 3** **Lines #: 10**
Specific Comment #1: Following TSCA sediment removal, revise the text to include a requirement that scows and equipment which have been in direct contact with TSCA sediments will require PCB wipe sampling verification of proper decontamination prior to using equipment for non TSCA sediment.

Commenting Organization: EGLE
Section: 4.1 **Page #: 4 - 5** **Lines #: N/A**
Specific Comment #2: Add an image and description for the off-road haul trucks.

Commenting Organization: EGLE
Section: 6.3 **Page #: 8** **Lines #: 1**
Specific Comment #3: Similar to the other areas described in Sections 6.1 and 6.2, indicate that SPA-3 will be constructed in accordance with the plans and specifications.

Commenting Organization: EGLE
Section: 6.3 **Page #: 8** **Lines #: N/A**
Specific Comment #4: SPA 3 will handle sediments with TSCA level contamination. Is there a plan for paving portions of the site that will be managing those materials? Revise the document accordingly.

Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site

Backfill Work Plan – Remedial Reach

Kalamazoo River Area 1
April 2022

GENERAL COMMENTS
Commenting Organization: EGLE
General Comment #1: Pre-placement chemical analysis of backfill material must be included in the backfill work plan or a reference to a companion document containing this information should be included. Backfill material should be compared to the probable effect concentrations to ensure that backfill materials will not cause harmful effects.

SPECIFIC COMMENTS
Commenting Organization: EGLE
Section: 4 **Page #: 2** **Lines #: N/A**
Specific Comment #1: This section must reference the most up to date dredge management decision tree. A copy of the dredge management decision tree should be included in this document.

Commenting Organization: EGLE
Section: 4 **Page #: 2** **Lines #: N/A**
Specific Comment #2: EGLE is concerned that situations may arise during residual dredging phases that may mobilize contaminated sediment on to clean backfill if dredging is still occurring upstream of DMUs that are closed out, and backfilling is planned as discussed in this section. EGLE understands that a situation like this is highly likely due to the limited confirmation sampling approach which only initially analyzes surficial intervals rather than fully characterizing cores for dredging missed inventory during the initial analytical efforts. Revise this section when discussing backfill sequencing to state that "Backfill will be placed in each DMU once post-dredging verification is complete in all upstream DMUs". EGLE understands that different sections of the river will be dredged in year 1 and that S-IM1 does not need to wait until all upstream dredging is completed. However main river segments that are contiguous should be backfilled only after upstream DMUs have been confirmed similar to what is being proposed already in Verburg Park Pond (Section 8.4).

Commenting Organization: EGLE
Section: 4 **Page #: 2** **Lines #: N/A**
Specific Comment #3: The text states that production rates may vary based on the area, water depth, and access at the active backfill location. Expand the discussion to clarify how production rates vary based on each of these conditions. In particular, discuss why S-IM1 is anticipated to have a lower production rate of 200 CY/Day.

Commenting Organization: EGLE
Section: 4 **Page #: 2** **Lines #: N/A**
Specific Comment #4: The backfill area is not highlighted orange as displayed in Section 6.2. It appears that the second object off the side of RSA-2 is the highlight for the backfill area in RSA-1. Correct the figure as necessary.

Commenting Organization: EGLE
Section: 6.1 & 6.2 **Page #: 7 - 8** **Lines #: N/A**
Specific Comment #5: Revise the text to specify the size/weight of armor stone that will require load out via an excavator. Using qualitative adjectives such as "larger" armor stone can lend to confusion when implementing these plans.

Commenting Organization: EGLE
Section: 8 **Page #: 1 1** **Lines #: N/A**
Specific Comment #6: Provide quantitative limits or ranges for high flowrates and deeper waters that would require releasing materials in the water column.

Commenting Organization: EGLE
Section: 8 **Page #: 1 1** **Lines #: N/A**
Specific Comment #7: Discuss if the RTK and onboard software can control and automate backfill operations including opening the bucket and moving the arm of the excavator to achieve correct lift thickness. This section should discuss if these controls will be used or if operations will be conducted manually.

Commenting Organization: EGLE
Section: 8.1 **Page #: 1 1 - 1 2** **Lines #: N/A**
Specific Comment #8: The list of backfill BMPs provided in this section is inconsistent with the backfill BMPs provided in the Resuspension Control Plan. Revise this list to include all backfill BMPs provided in the Resuspension Control Plan.

Commenting Organization: EGLE
Section: 8.2 **Page #: 1 1** **Lines #: N/A**
Specific Comment #9: If progress is going to be measured with the positioning system and daily volume placed, one of the reporting bullets should consist of the cumulative area that the bucket was opened, and dispensing backfill material for the area. With RTK and tracking software this should be reasonable to accomplish. Additionally, a CAD plan depicting the placement lines of the excavator should also be provided to EPA. Furthermore, with daily reports indicating the area of coverage volume placed per unit area can be measured are a useful first check of the placed cap thickness. A list of the DMUs targeted is less useful as some DMUs may be partially backfilled each day making it difficult to assess cap thickness without a survey. Verification push cores should be used as an additional line of evidence to verify "as-placed" thickness because uniform lifts may not be achieved in areas with high flowrates and deeper waters.

Commenting Organization: EGLE
Section: 8.3 **Page #: 1 3** **Lines #: 4-6**
Specific Comment #10: This section states that there are specific allowable tolerances for backfill placement. Describe the allowable tolerances, maximum placement, minimum placement etc.

Commenting Organization: EGLE
Section: 8.3 **Page #: 1 3** **Lines #: 11-22**
Specific Comment #11: Instead of utilizing push cores to supplement verification protocols on an as-needed basis, all DMUs should include push cores as an additional verification technique to confirm that the design backfill thickness has been achieved. As noted above, uniform lifts may not be achieved in areas with high flowrates and deeper waters.

Commenting Organization: EGLE
Section: 9.0 **Page #: 1 4** **Lines #: 3-6**

Specific Comment #12: Designated "sediment" and "backfill" scows should be used as much as possible to avoid cross-contamination of clean backfill material. Wet decontamination, especially with a gentle spray, may not be sufficient to prevent cross-contamination of backfill material, especially if the scows have come in contact with TSCA material before transitioning to backfill material. Revise the text to include a requirement that scows and equipment which has been in direct contact with sediments with >50 ppm PCBs will require PCB wipe sampling verification of proper decontamination prior to using the scow for backfill.